

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 165637

Monday, August 28, 2017 12:37:26 PM

165637

Page 2

Item ID: D5122-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Center Support, Upper

Start Date: 9/11/2017 Start Qty: 8.00

8

Cust Item ID:

Required Date: 9/18/2017 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.16				8			39 9-89 17-09-13
Quality Control									
130	Identify as per dwg & Stock Location: LG053	0.00							
130									
Packaging	Memo	0.08				8			SEP 14 2017 <i>me</i>
Packaging	LOCATION: LG054								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.80							17/9/19 <i>[Signature]</i>
Quality Control									

DAS
21
9-89

SEP 14 2017

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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					

Picklist Print

Monday, August 28, 2017 12:37:29 PM

Page 1

Work Order ID: 165637

165637

Parent Item: D5122-1

D5122-1

Parent Item Name: Center Support, Upper

Start Date: 9/11/2017

Required Date: 9/18/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV.A NEW ISSUE JFS 14/07/16 VERIFIED BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D5122-1TRN

Manufactured

No

100

Each

5.0000

0.5

4

DAS

D5122-1TRN

33

9-89

Center Support, Upper, Turning Detail

17/09/02

Location

Loc Qty

Loc Code

MAT060

5

155452

5

2

DQA: _____ Date: _____

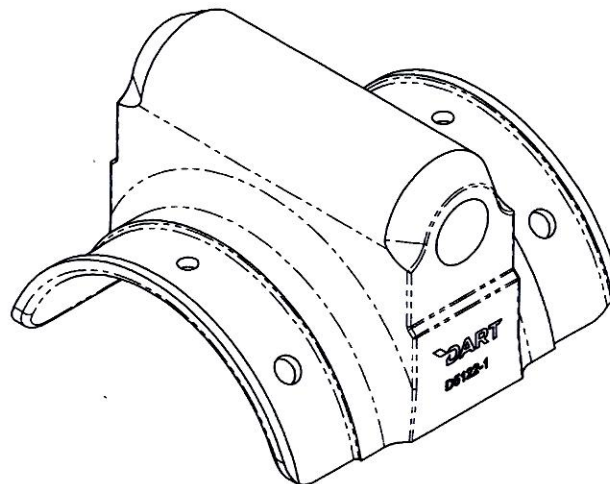


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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 165637

W

AUG 30 2017

D5122-1 CENTER SUPPORT

RELEASED
2014-08-25

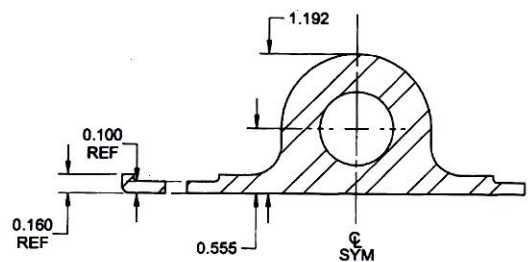
NOTES:

- 1) MATERIAL: MAKE FROM D5122-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART LOGO AND P/N "D5122-1" IN AREA SHOWN
USING 0.125 HIGH X 0.010-0.020 DEEP LETTERING PER DART QSI 044 6.3,
IDENTIFY WITH DART B/N PER DART QSI 044 6.1
- 7) WEIGHT: 2.13 lbs
- 8) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D5122-1-REVA.SLDPRT"

A		NEW ISSUE		AP	14.06.02
REV.		DESCRIPTION		BY	DATE
DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. A	
DRAWN	AP			SHEET 1 OF 3	
CHECKED	CP	DRAWING NO.		D5122	
MFG. APPR.	JLM	TITLE		CENTER SUPPORT	
APPROVED	MP	SCALE		NTS	
DE APPR.	DS	DATE		14.06.02	

APPROVED

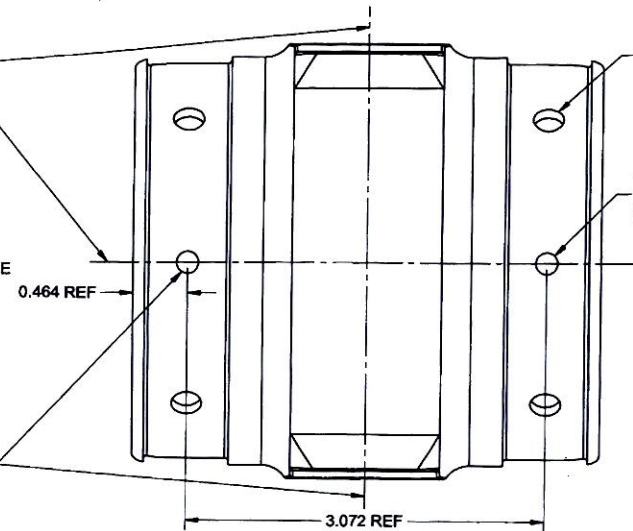
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SECTION A-A

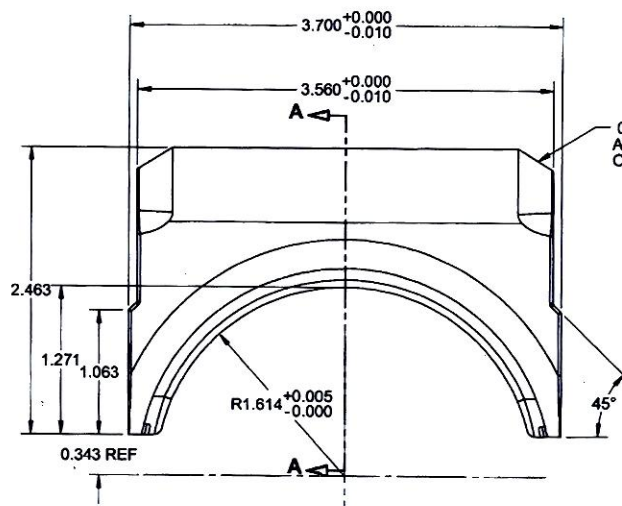
HOLES PERPENDICULAR
WITHIN 0.005 OVER
ENTIRE LENGTH

R0.063
AROUND INSIDE EDGE

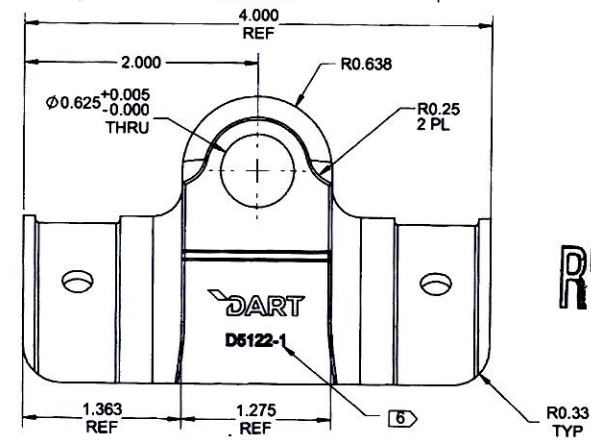


HOLES PERPENDICULAR
WITHIN 0.005 OVER
ENTIRE LENGTH

0.18 X 58° CMF
ALONG TOP EDGE
OF R0.638 (REF) EDGE

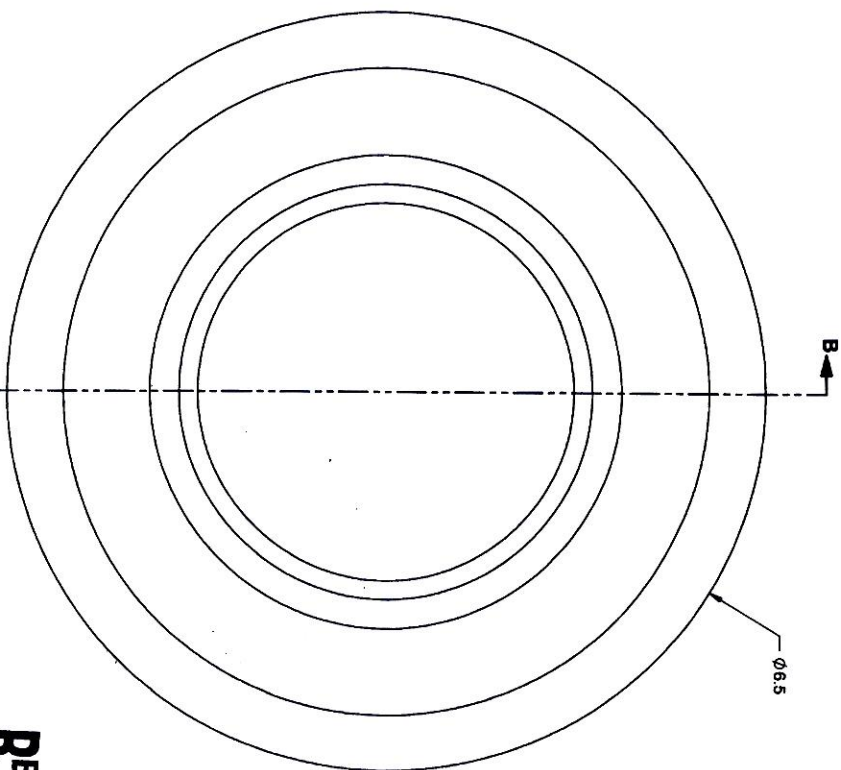


D5122-1 CENTER SUPPORT



RELEASED
2014-08-25

APPROVED	DESIGN	AP	DART AEROSPACE LTD	
	DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
	CHECKED	CP	DRAWING NO.	REV. A
	MFG. APPR.	JLM	D5122	SHEET 2 OF 3
	APPROVED	MP	TITLE	SCALE
	DE APPR.	DS	CENTER SUPPORT	NTS
	DATE	14.06.02	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



D5122-1TRN CENTER SUPPORT

DATE		14.06.02	
DESIGN	AP	DART AEROSPACE LTD HAMMERSBURY, ONTARIO, CANADA REV. A SHEET 3 OF 3 SCALE MTS	
DRAWN	AP		
CHECKED	CP		
MFG. APPR.	JLM		
APPROVED	MP		
DATE APPR.	DS	CENTER SUPPORT COMPANY OF DART AEROSPACE LTD (THIS DOCUMENT IS UNCLASSIFIED AND IS BEING RELEASED TO THE PUBLIC UNDER THE ATIA)	

RELEASED
2014-08-25
JW

DART AEROSPACE LTD		Work Order: 165637
Description: Center Support		Part Number: D5122-1
Inspection Dwg: D5122	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	1.182	1.202		1.192	1.192	1.190	1.191	1.192
AB	0.090	0.110		.099	.099	.098	.098	.098
AC	0.545	0.565		.555	.556	.554	.555	.555
AD	3.690	3.700		3.697	3.698	3.697	3.697	3.696
AE	3.550	3.560		3.557	3.557	3.556	3.556	3.556
AF	2.453	2.473		2.467	2.466	2.464	2.464	2.464
AG	1.261	1.281		1.273	1.273	1.272	1.273	1.272
AH	0.150	0.210		.180	.180	.180	.180	.180
AI	0.454	0.474		.464	.464	.464	.464	.465
AJ	Ø0.260	Ø0.267		.261	.261	.261	.261	.261
AK	Ø0.188	Ø0.194		.188	.188	.188	.188	.188
AL	3.067	3.077		3.072	3.072	3.072	3.072	3.072
AM	3.990	4.010		4.000	4.000	3.999	3.999	4.001
AN	1.990	2.010		1.999	1.999	1.999	1.999	1.999
AO	Ø0.625	Ø0.630		.625	.625	.625	.625	.625
AP								
AQ								
AR								
AS								
AT								
AU								
AV								
AW								
AX								
AY								
AZ								
Ensure that Ø " bore is perpendicular to " bore within "								
Accept/Reject				.001	.002	.001	.001	.0015

Measured by: DAS 44	Date: 17-09-09
Audited by: DAS 39	Date: 17-09-13
Preliminary Approval:	Date:

Rev	Date	Change	Revised By	Approved
A	15.03.12	New Issue	KJ	

DART AEROSPACE LTD		Work Order: 165637
Description: Center Support		Part Number: D5122-1
Inspection Dwg: D5122 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				6	7	8	4	5
HAAS Section								
AA	1.182	1.202		1.190	1.188	1.189		
AB	0.090	0.110		.100	.096	.099		
AC	0.545	0.565		.553	.551	.552		
AD	3.690	3.700		3.696	3.695	3.695		
AE	3.550	3.560		3.556	3.556	3.554		
AF	2.453	2.473		2.462	2.462	2.462		
AG	1.261	1.281		1.272	1.275	1.273		
AH	0.150	0.210		.180	.180	.180		
AI	0.454	0.474		.464	.464	.464		
AJ	Ø0.260	Ø0.267		.261	.261	.261		
AK	Ø0.188	Ø0.194		.188	.188	.188		
AL	3.067	3.077		3.072	3.072	3.072		
AM	3.990	4.010		4.001	4.002	4.002		
AN	1.990	2.010		1.999	1.997	2.000		
AO	Ø0.625	Ø0.630		.625	.625	.625		
AP								
AQ								
AR								
AS								
AT								
AU								
AV								
AW								
AX								
AY								
AZ								
Ensure that Ø " bore is perpendicular to " bore within "								
Accept/Reject				.000	.001	.0005		

Measured by: DAS 44	Date: 17-09-09
Audited by: DAS 39	Date: 17-09-13
Preliminary Approval: 9-89	Date:

Rev	Date	Change	Revised by	Approved
A	15.03.12	New Issue	KJ	